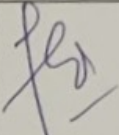
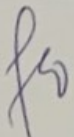

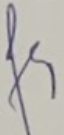
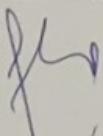
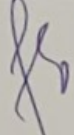
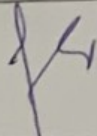
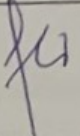

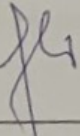
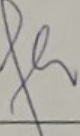
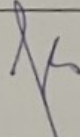

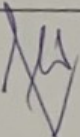


## LEMBAR KONSULTASI BIMBINGAN SKRIPSI

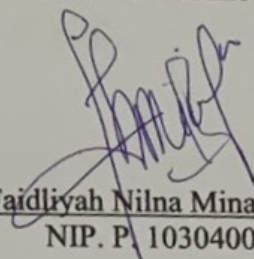
Nama : 1. Andini Meri Yulianti NIM. 1914028  
2. Hana Disa Prabandari NIM. 1914033

Judul Skripsi : Pra Rencana Pabrik Heksamin (*Hexamethylenetetramine*) dari Formaldehida dan Ammonia dengan Proses *Vacuum* Evaporator (Proses Meissner) Kapasitas Produksi 50.000 Ton/Tahun

No.	Tanggal	Materi Bimbingan	Paraf Dosen
1.	8 Maret 2023	- Pembahasan Bab 1, Bab 2, Flowsheet	
2.	16 Maret 2023	- Revisi Bab 1, Bab 2, Flowsheet	
3.	28 Maret 2023	- Revisi Flowsheet - Pembahasan Bab 3, Bab 4	
4.	6 April 2023	- Revisi Bab 3, Bab 4	
5.	11 April 2023	- Revisi Bab 3	
6.	12 April 2023	- Pembahasan Bab 7, Bab 8, Bab 9, Bab 10	

7.	11 Mei 2023	- Pembahasan Bab 5, Bab 6 Reaktor	
8.	25 Mei 2023	- Revisi Bab 4 - Revisi Bab 8	
9.	26 Mei 2023	- Revisi Bab 4	
10.	9 Juni 2023	- Pembahasan Bab 6 Evaporator - Revisi Bab 10	
11.	22 Juni 2023	- Revisi Bab 6 Evaporator	
12.	13 Juli 2023	- Revisi Bab 6 Evaporator - Pembahasan Bab 11	
13.	18 Juli 2023	- Revisi Bab 11	
14.	19 Juli 2023	- Revisi Bab 11 - Pembahasan Bab 12	

Mengetahui,  
Dosen Pembimbing,



Ir. Faidliyah Nilna Minah, ST., MT  
NIP. P. 1030400392



INSTITUT TEKNOLOGI NASIONAL MALANG  
JL. Bend. Sigura-gura no. 2  
MALANG

## PERBAIKAN SKRIPSI

Berdasarkan Ujian Skripsi Jurusan Teknik Kimia jenjang Strata Satu (S1) yang diadakan pada :

Hari : Senin

Tanggal: 7 Agustus 2023

Perlu adanya perbaikan pada Skripsi Berikut :

Nama : Angini Meri + Hana Dis-

Nim : 1914028 + 1914033

Perbaikan tersebut meliputi :

- ①. Semua instrumentasi (peletakan).
- ②. Cek NM & NP.

plu

Malang, 7 Agustus 2023

Dosen Penguji

Ir. Harimbi Shyawati, MT



## PERBAIKAN SKRIPSI

Berdasarkan Ujian Skripsi Jurusan Teknik Kimia jenjang Strata Satu (S1) yang diadakan pada :

Hari : Senin

Tanggal: 7 Agustus 2023

Perlu adanya perbaikan pada Skripsi Berikut :

Nama : Amonis Meri Y + Itna Disu

Nim : 19.14.028 + 19.14.033

Perbaikan tersebut meliputi :

- Amonis tdk ada tangkis penampung, cari alasannya?
- Dlm satu pipa ada 2 alat kontrol TC dan PC.
- Li dr kristalizer apa perlu? dan Reaktor.
- $C_6H_{12}N_4 \cdot 6H_2O$  terbentuk dimana?
- Sifat fisika hexamine tdk bisa suhu tinggi
- Tubuh hexamine  $263^\circ C \rightarrow$  di uap =  $50^\circ C$   
apa tdk pasat.
- Keluar reaktor ~~di~~ suhu  $70^\circ C$  apakah hexamine  
sah pasat. Telah direvisi

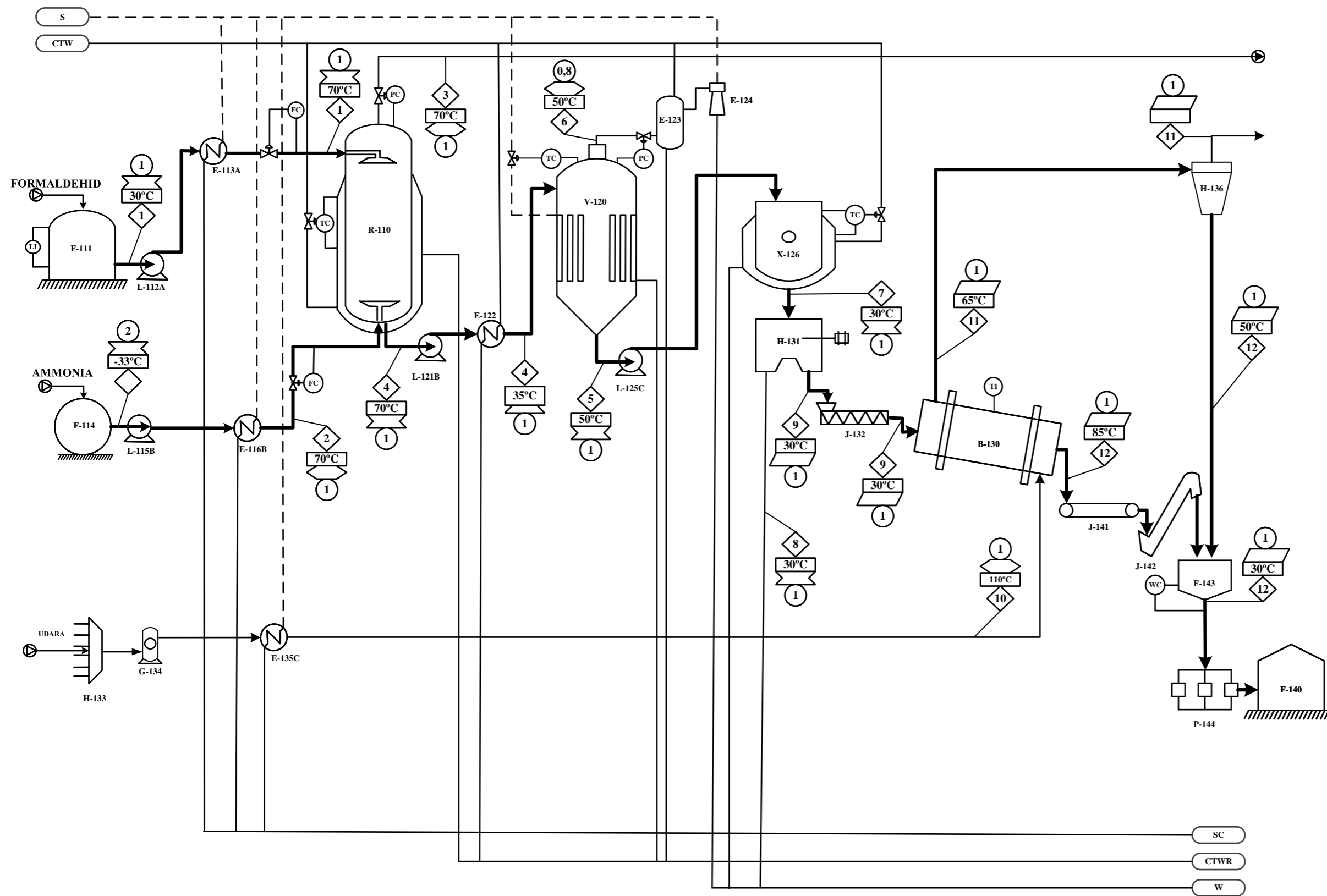
13-8-2023

Dr. Elvianto

Malang, 7 Agustus 2023

Dosen Penguji

Dr. Elvianto Duri Daryono, ST., MT



17	LI	LEVEL INDIKATOR
16	PI	PRESSURE INDIKATOR
15	WC	WEIGHT CONTROLLER
14	TC	TEMPERATURE CONTROLLER
13	PC	PRESSURE CONTROLLER
12	FC	FLOW CONTROLLER
11	W	WASTE
10	SC	STEAM CONDENSATE
9	CTWR	COOLING TOWER WATER RETURN
8	CTW	COOLING TOWER WATER
7	S	STEAM
6	SOLID	SOLID
5	GAS FLOW	GAS FLOW
4	PRESSURE	PRESSURE
3	LIQUID FLOW	LIQUID FLOW
2	TEMPERATUR	TEMPERATUR
1	MASS FLOW	MASS FLOW
No	SIMBOL	KETERANGAN

26	P - 144	MESIN PENGEMAS	1
25	F - 143	BIN PRODUK	1
24	F - 140	GUDANG PRODUK	1
23	J - 142	BUCKET ELEVATOR	1
22	J - 141	BELT CONVEYOR	1
21	H - 136	CYCLONE	1
20	E - 135C	HEATER UDARA	1
19	G - 134	BLOWER	1
18	H - 133	FILTER UDARA	5
17	J - 132	SCREW CONVEYOR	1
16	B - 130	ROTARY DRYER	1
15	H - 131	CENTRIFUGE	1
14	X - 126	CRYSTALLIZER	1
13	L - 125C	POMPA HEXAMINE	1
12	E - 124	JET EJEKTOR	1
11	E - 123	CONDENSOR	1
10	E - 122	COOLER	1
9	L - 121B	POMPA HEXAMINE	1
8	V - 120	EVAPORATOR VAKUM	1
7	E - 116B	HEATER AMMONIA	1
6	E - 113A	HEATER FORMALDEHID	1
5	L - 112A	POMPA FORMALDEHID	1
4	F - 111	STORAGE FORMALDEHID	4
3	L - 115B	POMPA AMMONIA	1
2	F - 114	STORAGE AMMONIA	1
1	R - 110	REAKTOR	1
No	KODE	NAMA ALAT	JUMLAH

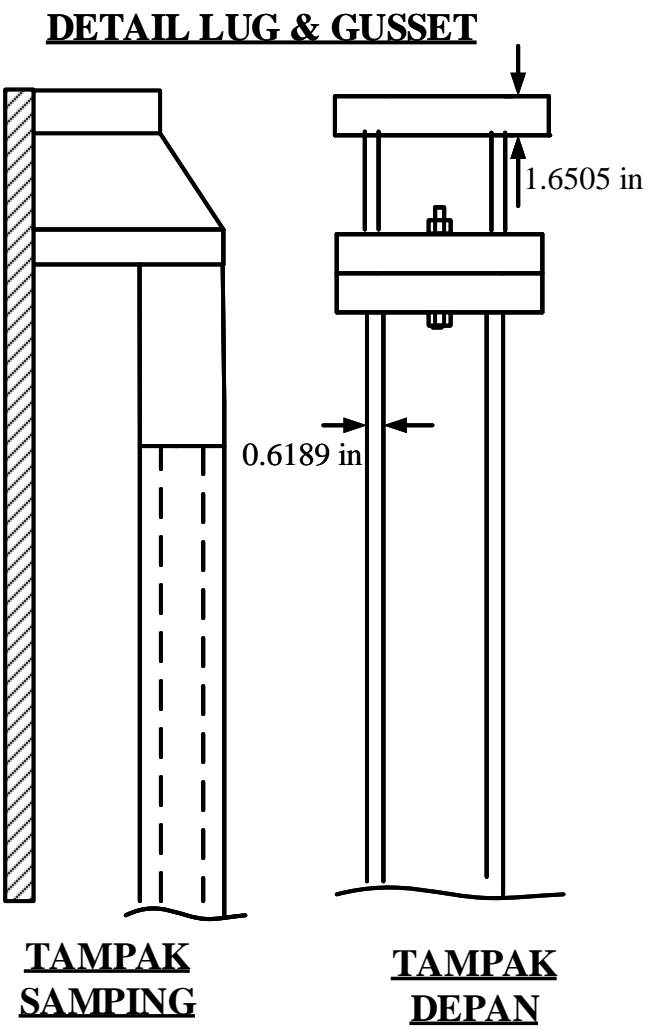
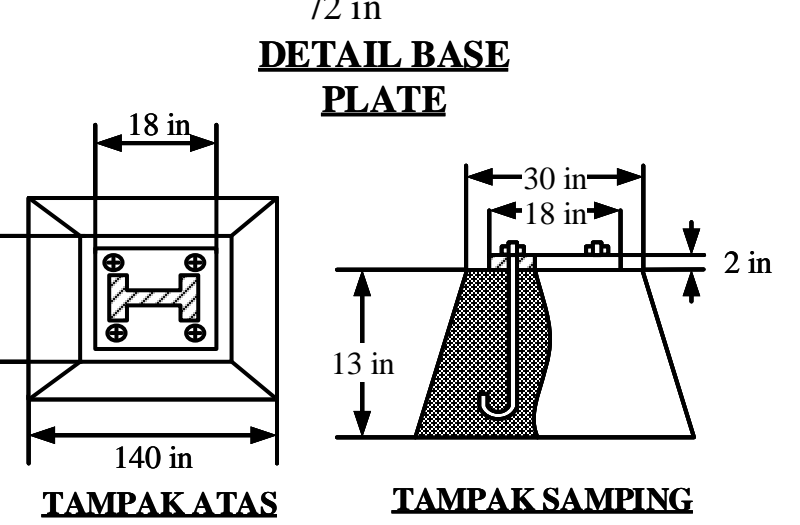
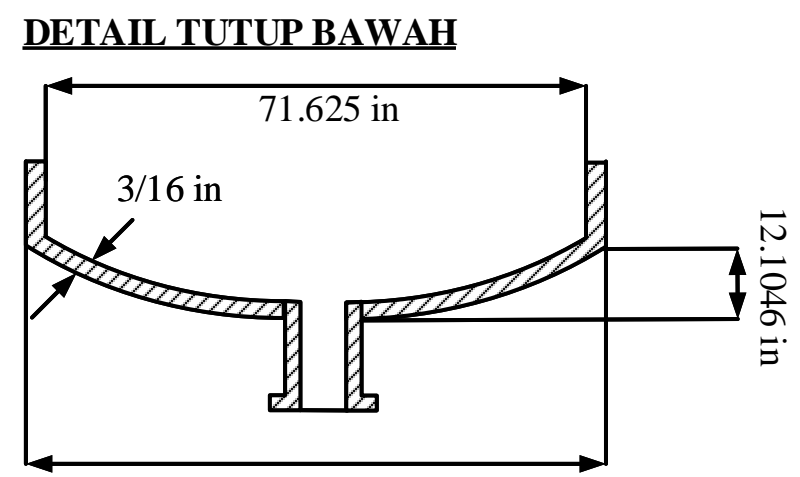
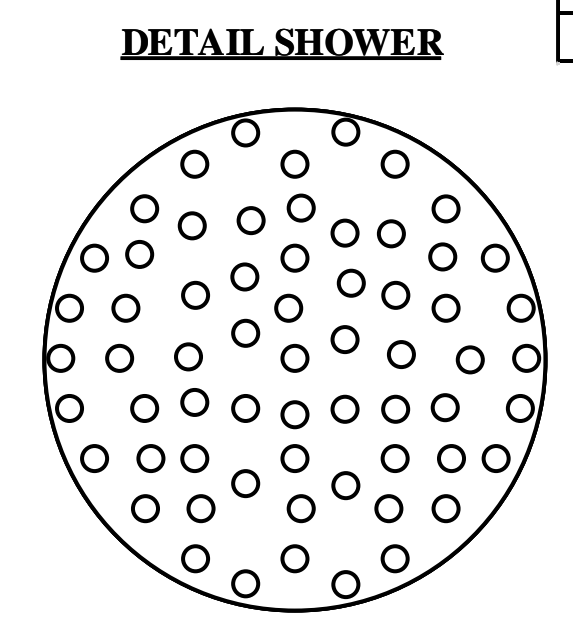
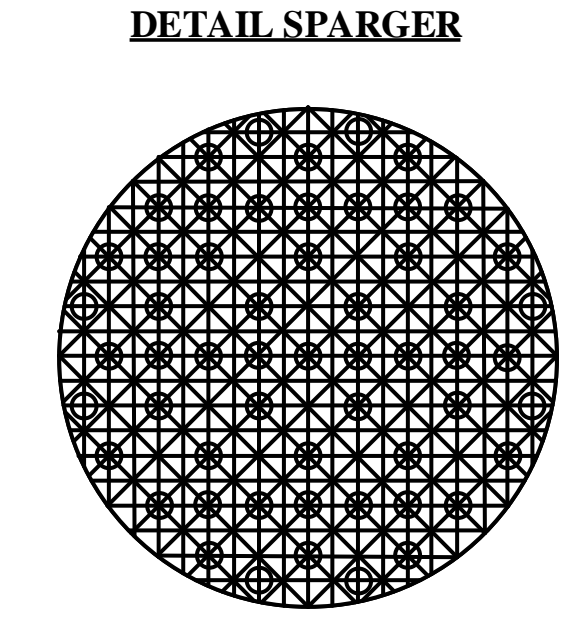
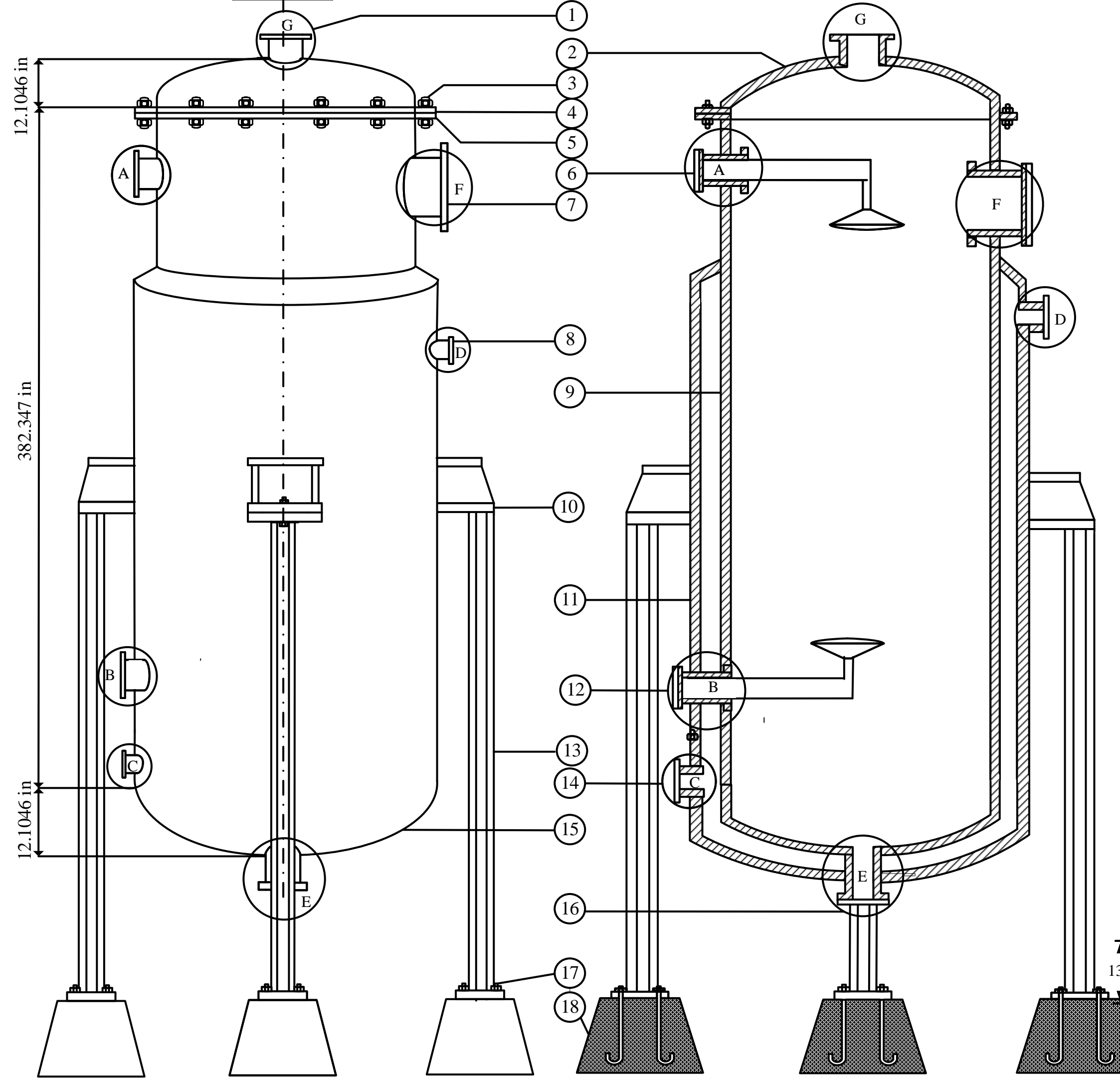
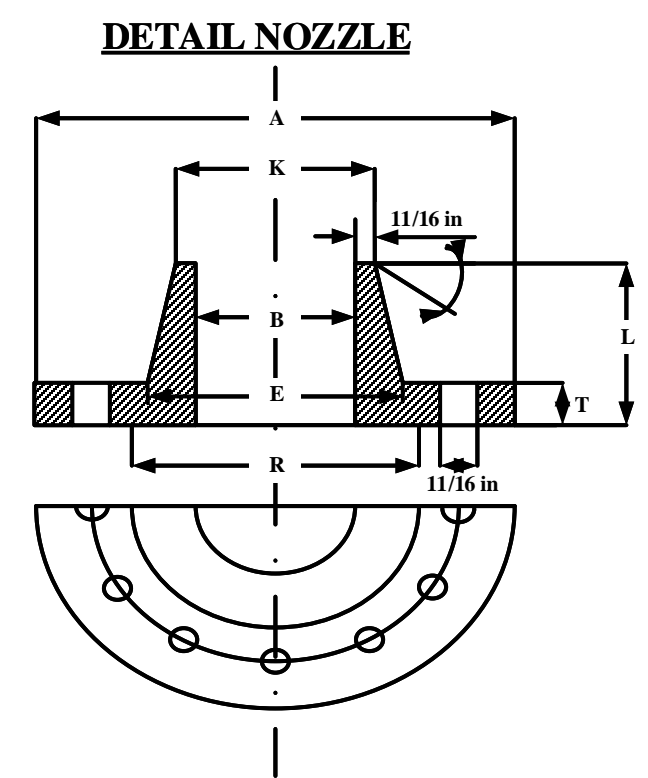
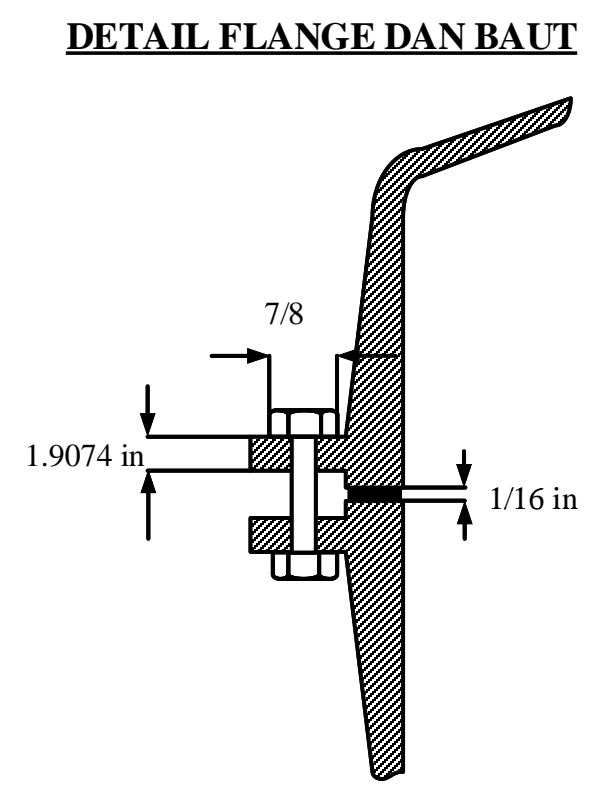
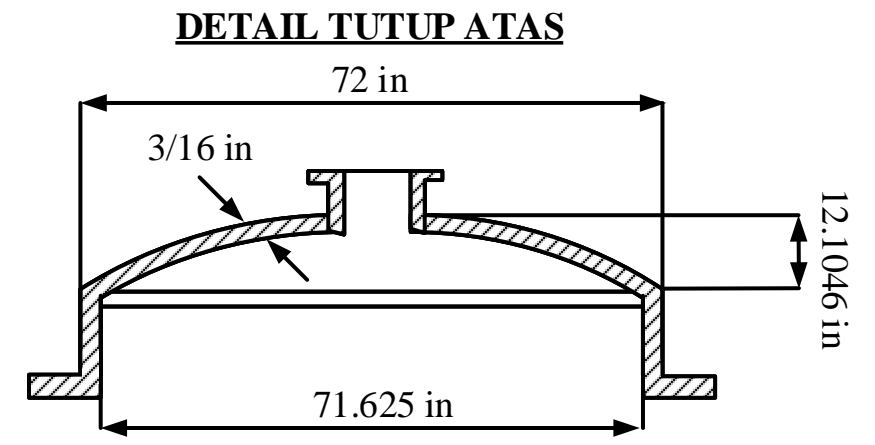
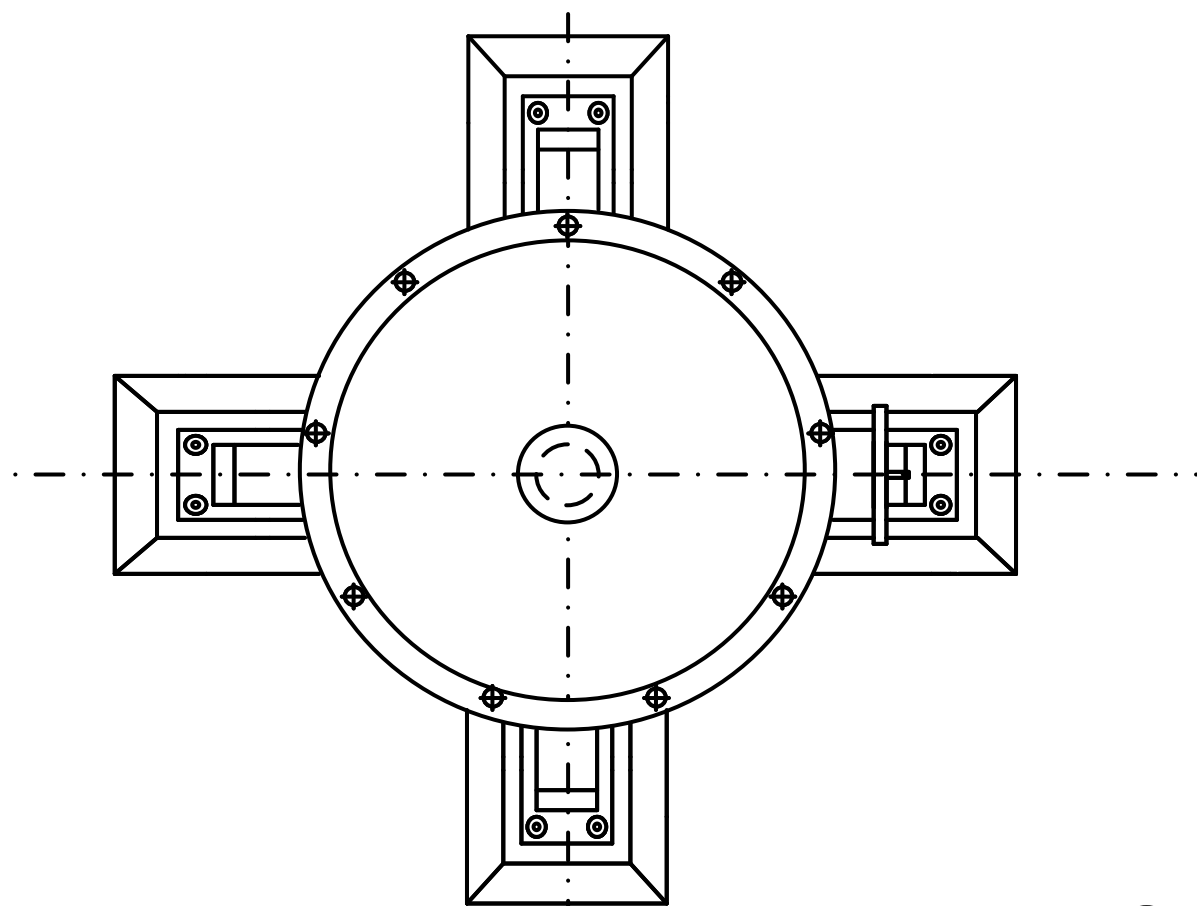
Komponen	NERACA MASSA (KG/JAM)											
	NOMOR ALIRAN											
	1	2	3	4	5	6	7	8	9	10	11	12
CH <sub>2</sub> O	1646,0719	-	49,3822	-	-	-	-	-	-	-	-	-
CH <sub>3</sub> OH	444,8843	-	444,8843	-	-	-	-	-	-	-	-	-
H <sub>2</sub> O	2357,8868	-	-	2357,8868	-	-	-	-	-	-	-	-
NH <sub>3</sub>	-	6551,3662	2932,2027	-	-	-	-	-	-	-	-	-
H <sub>2</sub> O	-	8,2304	-	8,2304	-	-	-	-	-	-	-	-
C <sub>6</sub> H <sub>12</sub> N <sub>4</sub>	-	-	-	7451,2188	7451,2188	-	7451,2188	1320,8597	6130,3591	-	61,3036	6069,0555
H <sub>2</sub> O	-	-	-	5748,0831	3043,4556	5070,7446	3043,4556	792,5158	2250,9397	-	25664,4131	244,0758
Udara	-	-	-	-	-	-	-	-	-	27592,2434	27592,2434	-
H <sub>2</sub> O	-	-	-	-	-	-	-	-	-	23657,5492	-	-
Total	4448,8430	6559,5965	3426,4692	15565,4190	10494,6744	5070,7446	10494,6744	2113,3755	8381,2988	51249,7926	53317,9601	6313,1313

**PROGRAM STUDI TEKNIK KIMIA  
FAKULTAS TEKNOLOGI INDUSTRI  
INSTITUT TEKNOLOGI NASIONAL MALANG**

**FLWSHEET**

**PRA RENCANA PABRIK HEKSAMIN (HEXAMETHYLENETETRAMINE) DARI FORMALDEHIDA DAN AMMONIA DENGAN PROSES VACUUM EVAPORATOR (PROSES MEISSNER) KAPASITAS PRODUKSI 50.000 TON/TAHUN**

<b>DIRANCANG OLEH :</b>	<b>DOSEN PEMBIMBING :</b>
ANDINI MERI YULIANTI HANA DISA PRABANDARI	1914028 1914033
	Ir. FAIDLİYAH NILNA MINAH, ST., MT. NIP. P. 1030400392

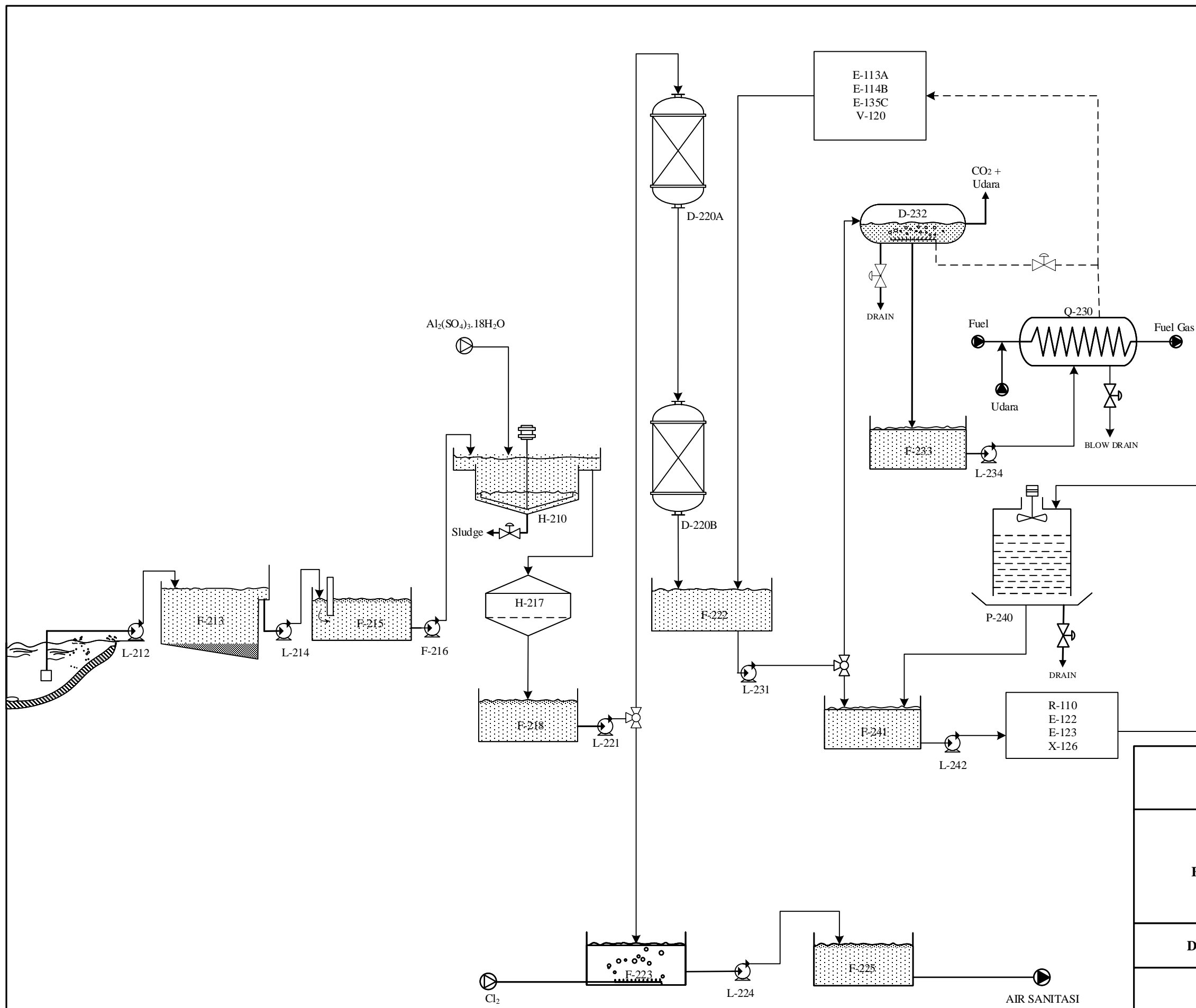


Nozzle NPS	A	T	R	E	K	L	B
A 3	7 1/2	15/16	5	4 1/4	3.50	2 3/4	3.07
B 2	6	3/4	3 5/8	3.06	2.38	2 1/2	2.07
C 1 1/2	5	11/16	2 7/8	2 4/7	1.90	2 7/16	1.61
D 1 1/2	5	11/16	2 7/8	2 4/7	1.90	2 7/16	1.61
E 3	7 1/2	15/16	5	4 1/4	3.50	2 3/4	3.07
F 20	27 1/2	1 11/16	23	22	20.00	5 11/16	19.3
G 10	16	1 3/16	12 3/4	12	10.75	4	10.02

No	KETERANGAN	BAHAN
18	PONDASI	CEMENT, SAND, AND GRAVEL
17	BASE PLATE	CAST IRON
16	NOZZLE OUTLET HEKSAMIN	SS SA 240 Grade M Type 316
15	TUTUP BAWAH	SS SA 240 Grade M Type 316
14	NOZZLE INLET AIR PENDINGIN	SS SA 240 Grade M Type 316
13	PENYANGGA	HAS SA 240 Grade M Type 316
12	NOZZLE GAS AMMONIA	SS SA 240 Grade M Type 316
11	JAKET PENDINGIN	SS SA 240 Grade M Type 316
10	LUG DAN GUSKET	CARBON STEEL
9	BADAN SILINDER	SS SA 240 Grade M Type 316
8	NOZZLE OUTLET AIR PENDINGIN	SS SA 240 Grade M Type 316
7	MAN HOLE	SS SA 240 Grade M Type 316
6	NOZZLE SHOWER FORMALDEHID	SS SA 240 Grade M Type 316
5	GASKET	ASBESTOS FILLED STAINLESS STEEL
4	FLANGE	HAS SA 240 Grade M Type 316
3	BAUT	HAS SA 193 B8C Type 347
2	TUTUP ATAS	SS SA 240 Grade M Type 316
1	NOZZLE PENGELUARAN PRODUK GAS	SS SA 240 Grade M Type 316

PROGRAM STUDI TEKNIK KIMIA  
 FAKULTAS TEKNOLOGI INDUSTRI  
 INSTITUT TEKNOLOGI NASIONAL MALANG  
 PERANCANGAN ALAT UTAMA  
**REAKTOR BUBBLE COLUMN**

DIRANCANG OLEH	DOSEN PEMBIMBING
ANDINI MERI YULIANTI    NIM. 1914028	I. FAIDLIYAH NILNA MINAH, ST., MT. NIP. P. 1030400392



NO.	KODE	NAMA ALAT
24.	L-242	POMPA AIR PENDINGIN
23.	F-241	BAK AIR PENDINGIN
22.	P-240	COOLING TOWER
21.	Q-230	BOILER
20.	L-234	POMPA KE BOILER
19.	F-233	BAK AIR UMPAN BOILER
18.	D-232	DEAERATOR
17.	L-231	POMPA AIR LUNAK
16.	F-225	BAK AIR SANITASI
15.	L-224	POMPA KE BAK AIR SANITASI
14.	F-223	BAK KLORINASI
13.	F-222	BAK AIR LUNAK
12.	L-221	POMPA AIR BERSIH
11.	D-220B	ANION EXCHANGER
10.	D-220A	KATION EXCHANGER
9.	H-210	TANGKI CLARIFIER
8.	F-218	BAK AIR BERSIH
7.	H-217	SAND FILTER
6.	L-216	POMPA CLARIFIER
5.	F-215	BAK SKIMMER
4.	L-214	POMPA SKIMMER
3.	F-213	BAK SEDIMENTASI
2.	L-212	POMPA AIR SUNGAI
1.	L-211	FILTER

**PROGRAM STUDI TEKNIK KIMIA  
FAKULTAS TEKNOLOGI INDUSTRI  
INSTITUT TEKNOLOGI NASIONAL MALANG**

**UNIT PENGOLAHAN AIR  
PRA RENCANA PABRIK HEKSAMIN  
(HEXAMETHYLENETETRAMINE) DARI  
FORMALDEHIDA DAN AMMONIA DENGAN VACUUM  
EVAPORATOR (PROSES MEISSNER)  
KAPASITAS 50.000 TON/TAHUN**

<b>DIRANCANG OLEH</b>	<b>DISETUJUI DOSEN PEMBIMBING</b>
ANDINI MERI YULIANTI HANA DISA PRABANDARI	Ir. Faidliyah Nilna Minah, ST., MT. NIP. P. 1030400392

1914028  
1914033

# TURNITIN SKRIPSI FULL

## ORIGINALITY REPORT

19%

SIMILARITY INDEX

18%

INTERNET SOURCES

0%

PUBLICATIONS

0%

STUDENT PAPERS

## PRIMARY SOURCES

1

[idoc.pub](#)

Internet Source

7%

2

[www.scribd.com](#)

Internet Source

7%

3

[doku.pub](#)

Internet Source

4%

4

Emilie Savage-Smith, Yossef Rapoport. "An Eleventh-Century Egyptian Guide to the Universe", Brill, 2014

Publication

<1%

5

"Indexes", New Testament Studies, 2009

Publication

<1%

6

A. Kayode Coker, Rahmat Sotudeh - Gharebagh. "Chemical Process Engineering", Wiley, 2022

Publication

<1%

Exclude quotes Off

Exclude matches Off

Exclude bibliography Off